# PROGRESS

OF

# MEDICAL SCIENCE.

## MEDICINE.

UNDER THE CHARGE OF

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**Primary Carcinoma of the Pancreas.**—The difficulty of diagnosing cancer of the pancreas is emphasized by the following case: In September, 1896, a retailer, aged fifty-seven years, complained of feeling tired and weak; he had a constant pain in the loins, and often in the right hip, which radiated to the posterior surface of the thigh; he also had lost some weight. He was a drinker, but without objective signs of alcoholism. In the winter of 1886 he had a severe diffuse bronchitis lasting several weeks. In the fall of 1893 he had repeated rheumatic pains in the back and both legs. There was no hereditary taint. The skin was of a dirty gray color, dry and inelastic. On the mucous membrane of the lower lip was a dark blue spot, about the size of a pinhead.

Nothing of importance was found in the examination of the thorax. The edge of the liver could be felt on deep breathing. The spleen could not be palpated. The urine was always free from albumin, sugar, and bile. Fat was never found in the stools. The patient vomited once, as a result of indigestion, the vomit containing free hydrochloric acid. From the above data the author made the diagnosis of probable Addison's disease. During August, 1897, the patient had repeated attacks of severe cardialgia, which caused the author's colleague to think of gallstones. Within two years the patient lost forty-three pounds. The skin became dirty yellow in color, so the diagnosis of Addison's disease was given up and replaced by that of occult cancer. The pain in the back continued, but the epigastrium was never sensitive. A tumor could never be felt. The appetite was always good. Death occurred July 21, 1898, with signs of extreme exhaustion. The important findings at the autopsy were chronic catarrh of the stomach and a primary carcinoma of the head of the pancreas about the size of the fist. The tail of the pancreas was likewise carcinomatous, yet the structure of the gland was in part recognizable. The tumor was close to the stomach, but had not attacked it. It was adherent to the liver. The retroperitoneal and mesenteric glands were as large as hazel-nuts, and were carcinomatous. The intestines, liver, spleen, kidneys, and adrenals were free from cancer. There were no gallstones. The microscopical examination proved the growth to be scirrhous. In the abdomen the growth lay behind the left lobe of the liver and the stomach, so that it was impossible to feel a tumor until these organs were removed. Since there was neither excess of fat in the stools nor signs of compression, cancer of the pancreas, a rare primary tumor, was not considered. Nor was there sufficient evidence for a diagnosis of cancer of the gall-bladder or stomach. The intestines were excluded as the seat of growth, since no tumor could be felt. There were no signs of stenosis, such as difficulty in defecation or the passage of blood or mucus. A diagnosis of cancer of the pancreas should have been made, first by exclusion, and secondly because a secondary neoplasm in this organ is quite common. As a rule (Strümpell), the head of the pancreas is the portion involved. In fifty-seven cases the head was involved in thirty-five (Madelung.) Willigk, in 467 autopsies on cancerous subjects, found only twenty-nine in which the pancreas was diseased. The tumor may compress the stomach, small intestines, vena porta, vena cava, gall-duct, and the neighboring nerve plexuses, causing severe cardialgia. In Rahn's case the cardia was compressed, causing a dilatation of the stomach. Récamier reports a case in which the tail of the pancreas was involved, causing compression of the left ureter and left-sided hydronephrosis. Pehl's case pressed the stomach against the anterio-abdominal wall, causing symptoms of incarceration. A differential diagnosis between cancer of the pancreas, stomach, and omentum is possible. Friedrich and Strümpell have often failed to find fat in the stools of patients who had extensive cancers of the pancreas. In Da Costa's thirty-seven cases there was vomiting twenty-two times as a result of simultaneous disease of the stomach, jaundice twenty-four, indigestion twenty-five, dropsy fifteen, and severe epigastric pain thirty-two times.—*Münchener med. Wochenschrift*, 1899, No. 5.

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**Tuberculous Meningitis.**—WAIBEL (*Munchener med. Wochenschrift*, 1899, No. 5) describes a case of this disease which is of unusual interest and importance because of its medico-legal bearing. The District Court called for expert testimony as to whether tuberculous meningitis could be caused by trauma. March 4, 1898, a school-girl was struck upon the head by a companion so severely that everything looked black before her eyes, and the left ear became red and swollen. Although the child had always been previously healthy, she complained of severe pain in the head, but continued to go to school. On the third day after the injury, toward evening, the child vomited three times and took to bed. Previous to the injury the child had always been cheerful and lively, but from the day of the blow she became depressed, and moaned and wept frequently. At times the patient complained of pain in the head, especially in the forehead. With the exception of weakness and constipation, examination revealed nothing on which to base a diagnosis. On March 13th the expression was dull, and there was a peculiar brilliancy in the eyes. The color changed frequently, the pulse was normal, the temperature 38.5° C.; the lungs and spleen were normal. On March 14th the mind was cloudy, and the child groaned and shrieked frequently, and complained of a very severe pain in the head. The heart was frequently irregular, at times intermittent, and the breathing was somewhat irregular. The pupils were normal, and the temperature 38.5° C. On this date a diagnosis of meningitis, with a bad prognosis, was made. On March 15th the patient was weaker, still conscious, but apathetic and without rigidity of the neck. This condition continued with variation till the 23d. The temperature gradually increased to 39° C.; the abdomen became scaphoid, the pulse was at times regular, then irregular, and again intermittent and moderately infrequent. The breathing was more irregular, being at times superficial and rapid, then very deep. The consciousness was tolerably undisturbed. From March 24th the child became much worse, remaining entirely unconscious for hours; there was slight convulsive spasms in the extremities, and the child frequently grasped at the air and picked at the bed-clothes. The legs showed slight spastic symptoms; the pupils were often larger than normal and unequally dilated; the eyes frequently turned upward. During the last few days there was almost entire unconsciousness, the pulse was very rapid and small, the patient dying March 30th, twenty-six days after the injury. The autopsy findings were as follows: The meninges were congested, the posterior veins especially being markedly filled. In both lateral ventricles there was a large amount of clear fluid, causing distention. The meninges at the base were infiltrated with a gelatinous exudate, and showed very small miliary tubercles, especially numerous along the course of the vessels. The convolutions were somewhat flattened. The lungs were markedly distended, and showed rather numerous gray tubercles on the clear red cut surface. The bronchial glands were as large as hazel-nuts, with cheesy, yellow tuberculous masses throughout, partly softened in the centre, so that a small cavity could be seen. The heart and abdomen were negative.

The author considers the bronchial glands as the primary focus of the disease, from which the meningitis and general tuberculosis developed, and thinks that the trauma produced a disturbance of the brain and the chest which made it possible for the tubercle bacilli to enter the neighboring blood and lymph vessels, and be carried over the entire body, especially to the brain, and there grow. The following points favor the traumatic origin of the disease in this case: 1. The child was previously healthy, without emaciation, cough, headache, fever, or changes in its disposition. 2. From the moment of injury she complained of headache, dizziness, and weakness, and three days later vomited and had disturbances of sleep. From this time the symptoms appeared and increased in severity. 3. According to the experiments of Koch and Baumgarten tubercles in the brain and other organs require about ten to twelve days for their growth. In the present case the first severe brain symptoms appeared on the tenth day of the disease. 4. A number of similar cases of traumatic brain tuberculosis have been observed and reported. The author and a medical committee from the University of Munich testified that they believed the disease was in this case caused by the trauma, but that there was no conclusive proof, as there is no characteristic difference between a tuberculosis meningitis caused by trauma and the spontaneous variety.

**Insufficiency of the Heart Muscle.**—MARTIUS (*Klin.-therap. Wochenschrift*, 1899, No. 16), in a thoughtful paper on this subject, describes the following varieties: 1. Pure acute insufficiency of the heart-muscle as the result of over-work or over-exercise. This occurs more easily in untrained persons, but even the heart of the trained man has its limits. Acute strains of a healthy heart rapidly recover under rest, but oft-repeated strains lead to permanent weakness. In such cases the contrast between the forcible apex-beat and the weak pulse is characteristic. 2. The acute heart-muscle insufficiency which forms the essential and primary cause of paroxysmal tachycardia. The enormous frequency of the pulse is secondary. The sudden disappearance of the cardiac dilatation is followed by the disappearance of the apex-beat, and a slowing with increased force of the pulse. The contrast between apex-beat and pulse appears and ceases with the attack. 3. Henschen has called attention to a dilatation occurring in young, weak, and anæmic girls as the result of over-work, but which develops slowly, remains long, and serves to assist in the production of dilatation as the result of relatively trifling causes. Loss of energy, palpitation, dyspnœa on exertion, headache, and loss of appetite are common symptoms, and gastric ulcer and severe anæmia possible consequences. 4. Cardiac weakness, with dilatation, occurs in children as the result of primay insufficiency of the heart-muscle. It occurs in weak and predisposed children without demonstrable cause. Though G. See described this as "hypertrophie cardiaque resultant de la croissance," other French clinicians have recognized that hypertrophy is not a feature of such cases, but that there is really temporary dilatation. Scrofulous children are especially predisposed, and the demands of school-life may be the exciting cause. The children are pale, weak, have loss of appetite and headache, and learn with difficulty. Moderate anæmia, and at times albuminuria are present. Various degrees can be recognized clinically. Highly characteristic is the effect of exercise on the heart in such cases. Climbing stairs may send the pulse up from 80 to 96 to 120 to 140, the objective palpitation increases and the radial pulse becomes impalpable. In severe cases the apex-beat may reach the anterior axillary line. 5. In adults alcohol is the most important predisposing cause, though in this, as in other cases, the effects vary in different individuals.

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**Malignant Struma, with Severe Hemorrhage from Varices of the Œsophagus.**—HELLENDALL (*Deutsche med. Wochenschrift*, 1899, No. 14) reports the following case: The patient, a woman, aged fifty-eight years, had a small goitre since the age of five. During the last six months the tumor grew rapidly, and she vomited blood very frequently. On the first occasion, in the course of three to four hours, she vomited ten washbowls of blood, which at first was dark—later clear red. During the past two months there was swelling of the legs and slight attacks of nocturnal dyspnœa. The patient was very cachectic, markedly cyanotic, and dropsical. On the left leg there were calcified varices. On the anterior surfaces of the neck and thorax there was a large tumor, which extended from the larynx down to the xiphoid process, to the right of the sternocleido muscle, and to the left to the posterior neck muscles, reaching almost to the spinal column. The surface was nodular and covered with large and small dilated veins. The skin was adherent but not ulcerated, and there were no pulsations. The tumor was of moderately hard, elastic consistence, except at the root of the mamma, where fluctuation could be felt. It was closely adherent to the tissues beneath. The pulse was moderately rapid, and somewhat stronger and fuller left than right. Examination of the heart was negative. There was slight dyspnœa, with exaggerated breathing and an occasional râle. There was exophthalmos. Ophthalmoscopic examination showed haziness of the left papilla and tortuosity of the veins of both eyes. The urine was negative. Subcutaneous trocars were inserted, but the patient died suddenly without dyspnœa or other special symptoms. A diagnosis of malignant struma was made from the anamnesis, the growth of the tumor with the underlying tissue, and the enlarged veins. Autopsy confirmed the diagnosis. The tumor had grown through the sternum and ribs; the jugular veins were thrombosed and vascularized. The œsophagus contained varices extending to about 4 c.m. above the cardia. The tumor in part resembled jelly, and in part marrow, and contained numerous cysts and hemorhages. The tumor had evidently developed from a benign struma. The growth in the thorax and the obliteration of intrathoracic veins caused the most striking symptoms, including the œsophageal varices. Varices of the œsophagus are divided into two classes—congenital and acquired. Both varieties have caused death by hemorrhage. Friedrich reported a case of this kind in a child of six. The acquired variety is divided into those which are associated with old age, and are found along the entire length of the œsophagus, and those which result from stasis in the portal system, as in cirrhosis of the liver, and are located in the lower part of the œsophagus. Cases of hemorrhage from senile œsophageal varices are very rare. The case now reported represents a third variety of œsophageal varices. These are located in the upper two-thirds of the œsophagus, and are dependent upon stasis in the superior vena cava. The cause of stasis in this case was the metastases of the tumor inside the superior cava and its branches. According to Litten the œsophageal veins have two exits; those in the lower portion pass through the intercostal veins to the azygos, while those in the upper part empty into the inferior thyroids, in order to pass directly into the superior cava.

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**Diagnostic Tuberculin Tests.**—Beck (*Deutsche med. Wochenschrift*, No. 9, 1899) reports the results of the diagnostic injection of tuberculin in the Berlin Institute for Infectious Diseases. Since 1891, 2508 persons have been tested; 1525 gave the reaction, but of these 371 had other evidences of tuberculosis; 338 had apical catarrh, and of these 298, or 85.2 per cent., gave a positive reaction. Two patients with intestinal tuberculosis, and five with uro-genital tuberculosis, gave positive reactions. Of 25 cases of laryngeal ulcer, 17 gave the reaction; 63.2 per cent. out of 106 cases of influenza gave the reaction; of 68 cases of pleurisy, 50, or 73.2 per cent., reacted; of 66 cases of bronchitis, 29, or 43.9 per cent.; of 76 cases of pneumonia (in the convalescence), 35.5 per cent.; of 14 cases of emphysema, 4, or 28.5 per cent.; 16 out of 17 cases of tuberculosis of lymph glands gave a positive reaction. In the negative case the disease proved to be sarcoma. Out of 13 cases of adenoid hypertrophy of the nose, 12 gave a positive reaction, and 3 out of 4 cases of ozæna likewise. In 96 cases of facial erysipelas, 52, or 54.2 per cent., gave the reaction, and in 25 cases of erysipelas of other parts of the body only 7. As in most of the former the disease began in the nose, the author looks on the adenoid growth as furnishing a favorable soil for the erysipelas coccus. One case of Addison's disease reacted to small doses (1 mg.). Chlorotics reacted to the extent of 53 per cent. Out of 127 cases of angina, only 47, or 37 per cent., reacted. Patients with gonorrhœa reacted to the extent of 55.6 per cent.; out of 143 syphilitics, 59 gave a positive reaction. Out of 15 cases of gastric ulcer, 10 gave reactions; in 13 cases of perityphlitis, 7 were positive. Most of the patients were women, and the author thinks that in women, who swallow the sputum more frequently than men, infection of the alimentary canal is especially likely to occur; 44 out of 87 cases of parametritis or perimetritis gave the reaction; 7 out of 20 of oöphoritis. Out of 55 women injected after abortion 11 reacted; 3 cases of lepra gave distinct reactions. The author points out that the results must not be applied generally, but the peculiarities of the service borne in mind. The great diagnostic value of the test is strongly brought out by the extensive series of cases. The later histories of the subjects who could be followed up are promised by the author, and will be awaited with much interest. The method used was the common one of ascertaining the absence of fever after taking the temperature at intervals of two hours for a day or two; then injecting 1 mg. of tuberculin; after one to two days, five and one-half days later, 10 mg. In children the doses are respectively 0.5, 1, and 5 mg. The injection is best given at night, as the reaction occurs about twelve hours later. A rise of at least 0.5° C. characterizes the reaction. If doubtful, the same dose should be repeated in a day or two.

## SURGERY.

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**Nephro-ureterectomy for Traumatic Hæmatohydro-nephro-ureterosis.**—SUMMERS (*Medical Record*, July 29, 1899) reports the case of a young woman who fell on a street curb, striking on the right lumbar region, but sustaining such an apparently slight injury that she was able to walk home. Her physician found no alarming symptoms, and not until the following morning, when bloody urine was passed, did her condition become alarming. When seen in consultation she was taking a fair amount of nourishment, but was too weak to rise, with a slight rise of temperature, and a pulse varying from 84 to 100. She was not seen again for nineteen days, when she came into the hospital; there had been a remarkable change. Although there had been a tumor previously that could be readily detected, it had now reached the proportions of a cystic growth, occupying the lower median part of the abdomen, extending well over toward the left iliac spine and down into the pelvis; it also distended the right side of the abdomen, extending up into the kidney region. The passing of dark, bloody urine had continued. The coloring-matter was from the blood. The diagnosis made was of hydronephrosis from injury to the ureter, yet this did not harmonize with the discharge of bloody urine.

The operation was commenced by an incision extending from the lumbar region above the crest of the ilium a short distance below the anterior superior iliac spine. The tumor was exposed behind the peritoneum, but could not be separated at first. It was punctured by a trocar and canula, and a large amount of fluid removed. A separation of the tumor on the outside showed the ureter to be thickened and enlarged. There was no obstruction or injury to the ureter. The kidney and ureter were useless, and it was decided to remove both. The renal vessels were ligated and divided. The sac was peeled off from the pelvis and the right side of the abdomen, but beneath the peritoneum. The ureter was divided well down. The repair was prompt, but the recovery rather slow, the patient leaving the hospital in about two months quite well.

Every semblance of kidney tissue had disappeared from the tumor, which was a fibrous sac; there was no pyramidal or cortical substance. The alteration and atrophy in such a short time were remarkable. The author has found only one case referred to of such size; in this the patient died.

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**On the Importance of Plastic Surgery in Renal Distention** (*i. e.*, **Nephrectasis**).—In a most important paper on this subject MORRIS (*The Lancet*, July 1, 1899) communicates his clinical experience in this particular branch of surgery. He deals especially with stenosis of the ureter, although he points out the fact that ureteral obstruction may be due to any of the following causes, which he has observed in cases under his care: 1. A valve formed of mucous membrane and situated near the renal pelvis. 2. Valvular formation caused by the obliquity of the ureter to the renal pelvis. 3. Stricture, including contraction of not more than one inch in length. 4. Ureter compressed by branch of the renal artery, abnormal or otherwise. 5. Calculus impacted in the ureter. 6. Fibrous band on the brim of the pelvis. 7. Twist of the ureter on its own axis. 8. Compression of the ureter by enlarged lymphatic glands situated between the ureter and iliac muscle. 9. A considerable length of ureter converted into an impervious cord. The pathological conditions named in the first four groups of the foregoing are amenable to plastic operations on the ureter and renal pelvis. That of the fifth group is removable by ureterotomy, a very successful operation for stone in the ureter, and now possible, no matter at what part of the ureter the calculus is impacted. A very slight operation after the ureter is once exposed at the involved part would suffice to remove without cutting the ureter itself—such causes as those in groups six and seven. The two last are now the only reasons for performing complete nephrectomy.